## PART I Authorization to Operate

A. The permittee is authorized to operate Class V Injection Well(s) at the facility described in the permit application and in the cover page of this permit, in accordance with the provisions set forth in this permit. In the case of this permit, the subsurface infiltration bed system is defined as the injection well(s). Operation of the existing percolation pond system as the injection well is authorized until such time as the subsurface infiltration bed system becomes operational.

B. The permittee must have routine and daily control of the treatment and effluent disposal system for operation in accordance with the terms of this permit.

C. Only the treated domestic sanitary wastewater described in the permit application shall be injected.

D. This permit and the authorization to inject shall remain in effect until the expiration date as stated on the cover page of this permit. If the permittee desires to continue injection past the expiration date of this permit, the permittee shall request a permit reissuance at least 180 days prior to expiration of this permit.

## PART II Construction Requirements

A. Injection Well Requirements

1. The permittee shall inject only domestic sanitary wastewater which has been treated by passing through a wastewater treatment system. The treatment system shall be adequate to meet the discharge limitations contained in Appendix A.

2. Injected effluent shall not surface from the effluent disposal system.

3. The permittee shall provide a means of sampling the wastewater after treatment and prior to injection. The plans for the sampling access are required to be submitted to ADEM.

4. The subsurface infiltration bed system disposal field areas shall be the areas identified by the permit application in accordance with the Construction Plans dated June 2010.

5. The disposal field areas shall be maintained so that standing or ponded water resulting from precipitation does not occur.

6. Adequate select soil fill material shall be maintained in areas where shallow subsurface soil restrictive features might limit effluent absorption.

7. The permittee shall maintain a thriving vegetated cover throughout the year and must overseed the disposal field areas when necessary to maintain a cover crop.

8. All treatment and disposal system components and equipment shall be properly installed, monitored, and maintained.

9. The loading rate of treated wastewater shall not exceed the design loading rate(s) specified in the permit application.

B. Modifications

Approval by ADEM shall be obtained prior to modification of any injection well or supporting surface. Modification shall mean any action that will change the configuration of the well beneath the surface, the methods of monitoring injection, or will result in injection of a fluid not specifically authorized by this permit.

## PART III Operating and Monitoring Requirements

A. Injection Fluid

1. The permittee shall not inject any substance that is defined as hazardous or toxic by Federal or State laws or regulations or any substance not identified in the application for this permit. The proposed use of substances other than those identified in the permit application must be reviewed and approved by the ADEM prior to use.

2. The daily volume of injected wastewater shall not exceed the design flow of 60,000 gallons per day, in accordance with the plans and specifications submitted with the permit application.

3. The rate of wastewater injection into the effluent disposal system shall not exceed the soil infiltration capacity and the requirements of Part II.A.9 of this permit.

4. The permittee shall monitor the fluid to be injected as specified in Appendix A of this permit.

5. The permittee shall not exceed the limits established in Appendix A of this permit.

6. ADEM may change the sampling requirements if the sampling data indicates a need to do so.

B. Groundwater Monitoring Requirements

1. Prior to injection into the subsurface infiltration bed system, the permittee shall submit a groundwater monitoring plan. The plan shall include proposed locations and construction plans for monitoring wells sufficient to monitor groundwater quality immediately hydraulically downgradient of the disposal field areas. The permittee shall make any modifications to the monitoring plan, as deemed necessary by ADEM.

2. Each monitoring well shall include the following.

   a) The permittee shall screen each monitoring well in the uppermost saturated zone. The well screen shall be of sufficient length to account for seasonal fluctuations in the water table and affects of the subsurface effluent disposal system.

   b) The annulus around each well casing above the well screen shall be sealed with bentonite to prevent the passage of surface water into the injection zone.

   c) The surface installation shall include a concrete protective pad around the base of the well, a metal protective casing, and a locking cap.

3. All surface water shall be routed away from the monitoring well's surface installation.

4. The monitoring well installation shall be completed and monitoring wells shall be sampled for background water quality prior to the use of the drip fields.

5. The permittee shall submit as built descriptions and geologic logs of monitoring wells within 60 days after drilling.

6. The permittee shall monitor the groundwater as specified in Appendix B of this permit.

7. The permittee shall not exceed the limits established in Appendix B of this permit.

C. Test Procedures

Test procedures for the analysis of pollutants shall conform to 40 CFR Part 136 of the Federal Register and guidelines published pursuant to Section 304(h) of the Federal Water Pollution Control Act (FWPCA). If more than one method of analysis of a substance is approved for use, a method having a detection limit lower than the permit limit shall be used. If the detection limit of all methods is higher than the permit limit, the method having the lowest detection limit shall be used and a report of less than detection limit shall constitute compliance. However, should the Environmental Protection Agency (EPA) approve a method with a lower detection limit during the term of this permit the permittee shall use the newly approved method.

D. Certified Operation

The permittee shall not operate any wastewater treatment plant unless the competency of the operator to operate such plant has been duly certified by ADEM pursuant to the Alabama Water Pollution Control Act (AWPCA), and the operator meets the requirements specified in ADEM Administrative Code, Rule 335-10-1.

E. Operation

1. The injection well(s) operated under this permit shall function properly and wastewater shall not surface. Should the injection well(s) fail to function properly, the permittee shall take immediate corrective action, to include cessation of injection, as required by ADEM.

2. The permittee shall adopt the following best management practices:

   a) Properly operate and maintain in good working order all treatment or control facilities or systems (and related appurtenances) installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the terms and conditions of this permit.

b) Comply with Federal, State, and local solid and liquid waste disposal regulations.

c) Solids, sludges, filter backwash, or any other pollutant or other waste removed in the course of treatment or control of wastewaters shall be disposed in a manner that complies with all applicable ADEM rules and regulations.

d) Upon the loss or failure of any treatment facilities, including but not limited to the loss or failure of the primary source of power of the treatment facility, the permittee shall, where necessary to maintain compliance with the discharge limitations specified in Appendix A, of this permit, or any other terms or conditions of this permit, cease, reduce or otherwise control all discharges until treatment is restored. If control of discharges during loss or failure of the primary source of power is to be accomplished by means of alternate power sources, standby generators or retention of inadequately treated effluent, the permittee must furnish to ADEM prior to the initiation of injection, a certification that such control mechanisms have been installed.

3. Bypass

(1) A bypass of the permitted injection wells is prohibited.

(2) A bypass of treatment facilities is not prohibited and need not meet the discharge limitations specified in Appendix A of this permit if:

(a) It is unavoidable to prevent loss of life, personal injury, or severe property damage;

(b) There are no feasible alternatives to the bypass, such as use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (note: this condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and

(c) The permittee submits a written request for authorization to bypass to ADEM at least ten (10) days prior to the anticipated bypass (if possible), the permittee is granted such authorization, and the permittee complies with any conditions imposed by ADEM to minimize any adverse impact on human health or the environment resulting from the bypass.

F. Monitoring Equipment and Instrumentation

All equipment and instrumentation used to determine compliance with the requirements of this permit shall be installed, maintained, and calibrated in accordance with the manufacturer's instructions or, in the absence of manufacturer's instructions, in accordance with accepted practices. At a minimum, flow measurement devices shall be calibrated at least once every 12 months.

## PART IV Records, Reports, & Submittals

A. Records

1. The permittee shall record the information listed below for all monitoring activities:

   a) The date, exact place, and time of sampling or sampling measurement(s);

   b) The name of individual(s) who perform the sampling or measurement(s);

   c) The date(s) analyses were performed;

   d) The name of the individual(s) who performed the analyses;

   e) The analytical or technical methods used;

   f) The results of each analysis performed; and

   g) The completed chain-of-custody forms for all samples collected.

2. The permittee shall retain all records concerning the data used to complete the permit application, the operation of the wells, and the nature and composition of pollutants injected; to include records of the calibration of instruments, meters and gauges, quality control records, and recordings from continuous monitoring instrumentation for the previous three years of operation.

3. When requested by ADEM, the permittee shall deliver copies of any of the records maintained in accordance with this permit.

B. Reports

1. Prior to injection into the subsurface infiltration bed system, the permittee shall submit a notification of initial injection. This notification shall identify the start date of injection and include a plat identifying the specific area within the effluent disposal field which will initially receive effluent.

2. The reporting period for all monitoring performed under Appendix A shall be monthly. The reporting period for all monitoring performed under Appendix B shall be quarterly. Upon the effective date of this permit, the permittee shall submit reports not later than 28 days after each reporting period, whether a discharge from the wastewater treatment system occurs or not. The monitoring reports shall include:

   a) The date, exact place, and time of sampling or sampling measurement(s);

   b) The results of each analysis and measurement performed.

3. If applicable, the permittee shall submit sludge inventory data not later than 30 days from the effective date of the permit which at a minimum contains the following information:

   a) Type of sludge stabilization/digestion method, daily or annual sludge production (dry weight basis), and ultimate sludge disposal practice(s).

   b) The permittee shall give prior notice to ADEM of at least 30 days of any change planned in the permittee's sludge disposal practices.

4. The permittee shall report to ADEM any of the following:

   a) Any planned action which will change the use of the injection well, will result in injection of a fluid different from that authorized by this permit, will result in injection of wastewater at a rate greater than the design flow rate, will change the method of operations of the injection well, or will change the method of the monitoring of well operations or injected fluids. No such changes shall be implemented unless or until a permit modification has been received.

   b) Any planned transfer of ownership or responsibility of operation of all or part of the permitted facility.

   c) Any relevant facts of which the permittee becomes aware which should have been submitted in a permit application and any corrections to data previously submitted in a permit application.

   d) Within 30 days of the effective date of this permit, the name, address and operator number of the certified wastewater operator in responsible charge of the facility. Also, any change in the operator must be reported to ADEM.

   e) The Permittee shall report to the Department, the county health department, and any other affected entity such as public water systems, within 24-hours of becoming aware of any sanitary sewer overflow or other unpermitted discharge to the surface from any part of the sanitary sewer collection system, treatment system or injection well. A written report shall be submitted no later than five (5) days after becoming aware of the occurrence of such discharge to and shall include the following information:

      (i) A description of the discharge;

      (ii) The period over which the discharge occurred, including exact dates and times or, if not corrected, the anticipated time the discharge is expected to continue; and

      (iii) A description of the steps taken and/or being taken to reduce or eliminate the discharge and to prevent its recurrence.

5. Studies, engineering reports, plans and specifications, plugging and abandonment plans, logging reports, and other technical documents submitted to comply with this permit shall be prepared by or under the supervision of qualified persons defined by Rule 6-8-.13 of the Underground Injection Control (UIC) Regulations of ADEM.

## PART V Plugging and Abandonment

The permittee shall perform any abandonment and closure actions that may be required by ADEM to remove a threat to groundwater quality or to the health of persons.

## PART VI Permit Modification, Revocation, Suspension, and Termination

A. ADEM may impose emergency additional conditions to this permit when necessary to protect waters of the state from pollution. These conditions may include suspension of the permit to inject. Any such condition shall remain in effect until the permit is modified, revoked, suspended or terminated in accordance with Rules 6-8-.12(a)3-5 and 6-8-.12(f) of the UIC Regulations of ADEM.

B. Non-emergency permit modification, revocation, suspension, and termination actions shall be accomplished in accordance with ADEM Administrative Rule 335-6-8.

## PART VII General Provisions

A. The permittee shall comply with all provisions of the UIC Regulations of the ADEM and shall comply with all provisions of this permit and shall reduce or halt injection if needed to maintain compliance with the permit and regulations.

B. The permittee shall comply with all applicable Federal and State hazardous waste management regulations.

C. The permittee shall allow members of the ADEM staff to:

1. access property and records of the permittee for purposes of inspection.

2. collect samples of the injected fluids, process and wastewater streams associated with the permitted injection wells.

3. collect samples from monitoring wells.

4. obtain copies of records upon request.

D. The permittee shall immediately take all reasonable steps to minimize or correct any adverse environmental impact resulting from the operation of the permitted injection wells.

E. This permit does not convey any property rights of any sort, or any exclusive privilege.

F. The filing of a request by the permittee for a permit modification, revocation, and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

G. Any noncompliance with this permit constitutes a violation of the Alabama Water Pollution Control Act (AWPCA) and/or the UIC regulations and is grounds for enforcement action such as permit termination, revocation, modification; or denial of a permit renewal application.

H. Injection to waters of the state, which in this case is groundwater, in accordance with this permit shall not result in the exceedance of a Maximum Contaminant Level (MCL) in groundwater as established by the Environmental Protection Agency. Injection to groundwater, in accordance with this permit shall not result in a violation of a surface water quality standard.

## Appendix A

Effluent from the treatment system shall be limited and monitored prior to flowing into the effluent disposal system by the permittee as specified below:

| EFFLUENT CHARACTERISTIC | DISCHARGE LIMITATIONS | | MONITORING REQUIREMENTS | | |
|---|---|---|---|---|---|
| | Bi Weekly (mg/l) | Monthly Average (mg/L) | FREQUENCY | SAMPLE TYPE | LOC |
| Biochemical Oxygen Demand (BOD5) | 45 | 30 | Bi Weekly | 24 hour composite | Ef |
| Total Suspended Solids (TSS) | 45 | 30 | Bi Weekly | 24 hour composite | Ef |
| Total Kjeldahl Nitrogen (TKN) | 30 | 20 | Bi Weekly | 24 hour composite | Ef |
| Fecal Coliform colonies/100ml | 200* | 200* | Bi Weekly | Grab | Ef |
| | MINIMUM | MAXIMUM | | | |
| Flow (gallons per day) | NA | 60,000 | Daily | Continuous | Ef |
| pH | 6.5 | 8.5 | Weekly | Grab | Ef |

**Appendix B**

The groundwater shall be monitored and limited by the permittee as specified below:

| GROUNDWATER CHARACTERISTIC | UNITS | GROUNDWATER LIMITS | MONITORING REQUIREMENTS | |
|---|---|---|---|---|
| | | | FREQUENCY | SAMPLE TYPE |
| Total Nitrate | mg/l | 7.5 | Quarterly | Grab |
| pH | Standard | 6.5-8.5 | Quarterly | Grab |

ADEM Permit Rationale

Date: October 28, 2010

Prepared by: Joe Kelly

Permit Applicant: BioFlow Inc
Steve Forehand
2544 Willow Point Road
Alexander City, AL 35010

Facility Name: The Ridge WWTP

Location: Ridge Parkway at Tyson Drive, Alexander City, Elmore County, Alabama
Approximate Latitude N 32° 44' 6.3" / Longitude W -85° 54' 43.2"

UIC Permit Number ALSI9926693

Draft Permit is: Reissuance with modification to utilize subsurface infiltration beds

Injection Description: Treated domestic sanitary effluent from a waste water treatment facility.

Discussion: Standard permit drafted.

1. No hazardous injection
2. Effluent sampling point required
3. Groundwater monitoring plan required
4. Discharge must be sampled in accordance with Appendix A
5. Results must be submitted in a timely manner
6. BMP's included in permit
7. The effluent disposal area must be maintained to prevent the occurrence of standing water resulting from precipitation or injection of treated wastewater
8. The permittee shall maintain a thriving vegetated cover throughout the year and must overseed the disposal area when necessary to maintain a cover crop
9. All subsurface effluent disposal system components and equipment must be properly installed, monitored, and maintained
10. The loading rate of treated wastewater shall not exceed the design loading rate
11. Soils evaluation performed by applicant